Author Index

Aitkin, L. and Martin, R.
Neurons in the inferior colliculus of cats sensitive to sound-source elevation (50) 97
Arehole, S., see Salvi, R.J. (50) 245

Brix, J., see Pickles, J.O. (50) 139

Caird, D., see Palmer, A.R. (50) 61
Cao, K., see Snyder, R.L. (50) 7
Chamberlain, S.C., see Statler, K.D. (50) 275
Cheatham, M.A. and Dallos, P.
Comparison of low- and high-side two-tone suppression in inner hair cell and organ of corti responses (50) 193

Dallos, P., see Cheatham, M.A. (50) 193
De Groot, J.C.M.J., Meeuwsen, F., Ruizendaal, W.E. and Veldman, J.E.
Ultrastructural localization of gentamicin in the cochlea (50) 34
Dengerink, H.A., see Flynn, A.J. (50) 119
Dooling, R.J., see Okanoya, K. (50) 175
Dooling, R.J., see Okanoya, K. (50) 185

Flynn, A.J., Dengerink, H.A. and Wright, J.W.
Androgenic effects on angiotensin II-induced blood pressure and cochlear blood flow changes in rats (50) 119
Freedom, T., see Harris, D.M. (50) 1
Fukushima, N., White, P. and Harrison, R.V.
Influence of acoustic deprivation on recovery of hair cells after acoustic trauma (50) 107

Gitter, A.H., see Zenner, H.P. (50) 289
Gratton, M.A., Salvi, R.J., Kamen, B.A. and Saunders, S.S.
Interaction of cisplatin and noise on the peripheral auditory system (50) 211
Gratton, M.A., see Salvi, R.J. (50) 245

Harris, D.M., Rotche, R. and Freedom, T.
Postnatal growth of cochlear spiral in mongolian gerbil (50) 1
Harrison, R.V., see Fukushima, N. (50) 107
Hellstrom, L.I. and Schmiedt, R.A.
Compound action potential input/output functions in young and quiet-aged gerbils (50) 163
Henson, M.M., see Henson, O.W. (50) 259
Henson, O.W., Koplas, P.A., Keating, A.W., Huffman, R.F. and Henson, M.M.
Cochlear resonance in the mustached bat: Behavioral adaptations (50) 259
Huffman, R.F., see Henson, O.W. (50) 259

Kamen, B.A., see Gratton, M.A. (50) 211
Keating, A.W., see Henson, O.W. (50) 259
Kelly, K., see Snyder, R.L. (50) 7
Klinke, R., see Schermuly, L. (50) 295
Koplas, P.A., see Henson, O.W. (50) 259

Leake, P.A., see Snyder, R.L. (50) 7

Manley, G.A., see Pickles, J.O. (50) 139
Martin, R., see Aitkin, L. (50) 97
Meeuwsen, F., see De Groot, J.C.M.J. (50) 34
Miller, J.M., see Ryan, A.F. (50) 57
Mroz, E.A., see Sewell, W.F. (50) 127

Okanoya, K. and Dooling, R.J.
Detection of auditory sinusoides of fixed and uncertain frequency by budgerigars (*Melopsittacus undulatus*) and zebra finches (*Poephila guttata*) (50) 175
Okanoya, K. and Dooling, R.J.
Detection of gaps in noise by budgerigars (*Melopsittacus undulatus*) and zebra finches (*Poephila guttata*) (50) 185
Ooyama, H., see Yano, J. (50) 237

Palmer, A.R., Rees, A. and Caird, D.
Interaural delay sensitivity to tones and broad band signals in the guinea-pig inferior colliculus (50) 61
Pfingst, B.E. and Rai, D.T.
Effects of level on nonspectral frequency difference limens for electrical and acoustic stimuli (50) 43
Pfingst, B.E.
Changes over time in thresholds for electrical stimulation of the cochlea (50) 225
Pickles, J.O., Brix, J. and Manley, G.A.
Influence of collagenase on tip links in hair cells of the chick basilar papilla (50) 139
Powers, N., see Salvi, R.J. (50) 245

Rai, D.T., see Pfingst, B.E. (50) 43
Rebscher, S.J., see Snyder, R.L. (50) 7
Rees, A., see Palmer, A.R. (50) 61

Rotche, R., see Harris, D.M. (50) 1
Ruizendaal, W.E., see De Groot, J.C.M.J. (50) 34
Ryals, B.M. and Westbrook, E.W.
Hair cell regeneration in senescent quail (50) 87
Ryan, A.F., Miller, J.M., Wang, Z.-X. and Woolf, N.K.
Spatial distribution of neural activity evoked by electrical stimulation of the cochlea (50) 57

Salvi, R.J., Saunders, S.S., Gratton, M.A., Arehole, S. and Powers, N.
Enhanced evoked response amplitudes in the inferior colliculus of the chinchilla following acoustic trauma (50) 245
Salvi, R.J., see Gratton, M.A. (50) 211
Saunders, S.S., see Gratton, M.A. (50) 211
Saunders, S.S., see Salvi, R.J. (50) 245
Schermuly, L., Vossieck, T. and Klinke, R.
Furosemide has no effect on endocochlear potential and tuning properties of primary afferent fibres in the pigeon inner ear (50) 295
Schmiedt, R.A., see Hellstrom, L.I. (50) 163
Sewell, W.F. and Mroz, E.A.
Purification of a low-molecular-weight excitatory substance from the inner ears of goldfish (50) 127
Slepecky, N.B., see Statler, K.D. (50) 275
Smith, R.L., see Statler, K.D. (50) 275
Snyder, R.L., Rebscher, S.J., Cao, K., Leake, P.A. and Kelly, K.
Chronic intracochlear electrical stimulation in the neonatally deafened cat. I: Expansion of central representation (50) 7
Statler, K.D., Chamberlain, S.C., Slepecky, N.B. and Smith, R.L.
Development of mature microcystic lesions in the cochlear nuclei of the Mongolian gerbil, *Meriones unguiculatus* (50) 275
Sugai, T., see Yano, J. (50) 237
Sugitani, M., see Yano, J. (50) 237

Veldman, J.E., see De Groot, J.C.M.J. (50) 34
Vossieck, T., see Schermuly, L. (50) 295

Wang, Z.-X., see Ryan, A.F. (50) 57
Westbrook, E.W., see Ryals, B.M. (50) 87
White, P., see Fukushima, N. (50) 107
Woolf, N.K., see Ryan, A.F. (50) 57
Wright, J.W., see Flynn, A.J. (50) 119

Yano, J., Sugai, T., Sugitani, M. and Ooyama, H.
Observations of the sensing and the tectorial membrane in bullfrog amphibian papilla: Their possible functional roles (50) 237
Yates, G.K.
Basilar membrane nonlinearity and its influence on auditory nerve rate-intensity functions (50) 145

Zenner, H.P., Zimmermann, U. and Gitter, A.H.
Cell potential and motility of isolated mammalian vestibular sensory cells (50) 289
Zimmermann, U., see Zenner, H.P. (50) 289

Subject Index

Acoustic deprivation
Cochlea; Hair cell; Acoustic trauma; Ossiculectomy (Fukushima, N. (50) 107)

Acoustic trauma
Cochlea; Hair cell; Acoustic deprivation; Ossiculectomy (Fukushima, N. (50) 107)

Inferior colliculus; Evoked response; Hearing loss (Salvi, R.J. (50) 245)

Age
Hair cells; Regeneration (Ryals, B.M. (50) 87)

Aging
Compound action potential; Auditory nerve; Gerbil; Presbyacusis; Cochlear microphonic (Hellstrom, L.I. (50) 163)

Cochlear nucleus; Gerbil; Microcystic lesion (Statler, K.D. (50) 275)

Aminoglycoside cochleotoxicity
Cochlea; Gentamicin; Immunoelectron microscopy (De Groot, J.C.M.J. (50) 34)

Amphibian papilla
Tonotopic organization; Sensing membrane; Tectorial membrane; Frog (Yano, J. (50) 237)

Amplitude modulation
Frequency discrimination; Level; Auditory prosthesis; Electrical stimulation; SAM noise; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Androgens
Angiotensin II; Blood pressure; Cochlear blood flow; Rat (Flynn, A.J. (50) 119)

Angiotensin II
Androgens; Blood pressure; Cochlear blood flow; Rat (Flynn, A.J. (50) 119)

Auditory growth and development
Gerbil; Cochlea; Otic capsule; Middle ear; Inferior colliculus (Harris, D.M. (50) 1)

Auditory nerve
Compound action potential; Aging; Gerbil; Presbyacusis; Cochlear microphonic (Hellstrom, L.I. (50) 163)

Auditory prosthesis
Frequency discrimination; Level; Amplitude modulation; Electrical stimulation; SAM noise; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Electrical stimulation; Nonhuman primate; Psychophysics; Threshold (Pfingst, B.E. (50) 225)

Basilar membrane nonlinearity
Dynamic range; Rate-intensity function; Outer hair cells (Yates, G.K. (50) 145)

Bats
Cochlear potentials; Cochlear resonance; Cochlear emission; Echolocation (Henson, O.W. (50) 259)

Bird
Furosemide; Ototoxicity; Endocochlear potential (Schermuly, L. (50) 295)

Bird hearing
Gap detection; Temporal acuity; Spectral-temporal trade-off (Okanoya, K. (50) 185)

Birds
Frequency uncertainty; Critical ratios (Okanoya, K. (50) 175)

Blood pressure
Androgens; Angiotensin II; Cochlear blood flow; Rat (Flynn, A.J. (50) 119)

Central auditory system
Cochlear prosthesis; 2-deoxyglucose; Gerbil; Ear, inner (Ryan, A.F. (50) 57)

Chick
Stereocilia; Tip link; Collagenase; Hyaluronidase; Transduction (Pickles, J.O. (50) 139)

Chromatography
Neurotransmitter; Excitatory amino acids; Hearing; Hair cells (Sewell, W.F. (50) 127)

Cisplatin
Ototoxicity; Noise/drug interaction; Evoked response; Hair cell loss; Hearing loss (Gratton, M.A. (50) 211)

Cochlea
Auditory growth and development; Gerbil; Otic capsule; Middle ear; Inferior colliculus (Harris, D.M. (50) 1)

Aminoglycoside cochleotoxicity; Gentamicin; Immunoelectron microscopy (De Groot, J.C.M.J. (50) 34)

Hair cell; Acoustic trauma; Acoustic deprivation; Ossiculectomy (Fukushima, N. (50) 107)

Hair cell; Nonlinearity; Two-tone suppression (Cheatham, M.A. (50) 193)

Cochlear blood flow
Androgens; Angiotensin II; Blood pressure; Rat (Flynn, A.J. (50) 119)

Cochlear emission
Cochlear potentials; Bats; Cochlear resonance; Echolocation (Henson, O.W. (50) 259)

Cochlear microphonic
Compound action potential; Auditory nerve; Aging; Gerbil; Presbyacusis (Hellstrom, L.I. (50) 163)

Cochlear nucleus
Gerbil; Microcystic lesion; Aging (Statler, K.D. (50) 275)

Cochlear potentials
Bats; Cochlear resonance; Cochlear emission; Echolocation (Henson, O.W. (50) 259)

Cochlear prosthesis
Central auditory system; 2-deoxyglucose; Gerbil; Ear, inner (Ryan, A.F. (50) 57)

Cochlear resonance
Cochlear potentials; Bats; Cochlear emission; Echolocation (Henson, O.W. (50) 259)

Collagenase
Stereocilia; Chick; Tip link; Hyaluronidase; Transduction (Pickles, J.O. (50) 139)

Compound action potential
Auditory nerve; Aging; Gerbil; Presbyacusis; Cochlear microphonic (Hellstrom, L.I. (50) 163)

Critical ratios
Frequency uncertainty; Birds (Okanoya, K. (50) 175)

2-deoxyglucose
Cochlear prosthesis; Central auditory system; Gerbil; Ear, inner (Ryan, A.F. (50) 57)

Dynamic range
Rate-intensity function; Outer hair cells; Basilar membrane nonlinearity (Yates, G.K. (50) 145)

Ear, inner
Cochlear prosthesis; Central auditory system; 2-deoxyglucose; Gerbil (Ryan, A.F. (50) 57)

Echolocation
Cochlear potentials; Bats; Cochlear resonance; Cochlear emission (Henson, O.W. (50) 259)

Electrical stimulation
Frequency discrimination; Level; Amplitude modulation; Auditory prosthesis; SAM noise; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Auditory prosthesis; Nonhuman primate; Psychophysics; Threshold (Pfingst, B.E. (50) 225)

Electrical stimulation, Cochlear prosthesis, Plasticity, Auditory development, Inferior colliculus
(Snyder, R.L. (50) 7)

Elevation
Inferior colliculus; Single unit; Free-field; Sound localization (Aitkin, L. (50) 97)

Endocochlear potential
Furosemide; Ototoxicity; Bird (Schermuly, L. (50) 295)

Equilibrium
Vertigo; Hair cell; Inner ear (Zenner, H.P. (50) 289)

Evoked response
Cisplatin; Ototoxicity; Noise/drug interaction; Hair cell loss; Hearing loss (Gratton, M.A. (50) 211)

Inferior colliculus; Acoustic trauma; Hearing loss (Salvi, R.J. (50) 245)

Excitatory amino acids
Neurotransmitter; Hearing; Hair cells; Chromatography (Sewell, W.F. (50) 127)

Free-field
Inferior colliculus; Single unit; Elevation; Sound localization (Aitkin, L. (50) 97)

Frequency discrimination
Level; Amplitude modulation; Auditory prosthesis; Electrical stimulation; SAM noise; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Frequency uncertainty
Critical ratios; Birds (Okanoya, K. (50) 175)

Frog
Amphibian papilla; Tonotopic organization; Sensing membrane; Tectorial membrane (Yano, J. (50) 237)

Furosemide
Ototoxicity; Endocochlear potential; Bird (Schermuly, L. (50) 295)

Gap detection
Temporal acuity; Bird hearing; Spectral-temporal trade-off (Okanoya, K. (50) 185)

Gentamicin
Cochlea; Aminoglycoside cochleotoxicity; Immunoelectron microscopy (De Groot, J.C.M.J. (50) 34)

Gerbil
Auditory growth and development; Cochlea; Otic capsule; Middle ear; Inferior colliculus (Harris, D.M. (50) 1)

Cochlear prosthesis; Central auditory system; 2-deoxyglucose; Ear, inner (Ryan, A.F. (50) 57)

Compound action potential; Auditory nerve; Aging; Presbyacusis; Cochlear microphonic (Hellstrom, L.I. (50) 163)

Cochlear nucleus; Microcystic lesion; Aging (Statler, K.D. (50) 275)

Guinea pig
Inferior colliculus; Interaural time delays; Single unit recording (Palmer, A.R. (50) 61)

Hair cell
Cochlea; Acoustic trauma; Acoustic deprivation; Ossiculectomy (Fukushima, N. (50) 107)

Cochlea; Nonlinearity; Two-tone suppression (Cheatham, M.A. (50) 193)

Equilibrium; Vertigo; Inner ear (Zenner, H.P. (50) 289)

Hair cell loss
Cisplatin; Ototoxicity; Noise/drug interaction; Evoked response; Hearing loss (Gratton, M.A. (50) 211)

Hair cells
Regeneration; Age (Ryals, B.M. (50) 87)

Neurotransmitter; Excitatory amino acids; Hearing; Chromatography (Sewell, W.F. (50) 127)

Hearing
Neurotransmitter; Excitatory amino acids; Hair cells; Chromatography (Sewell, W.F. (50) 127)

Hearing loss
Cisplatin; Ototoxicity; Noise/drug interaction; Evoked response; Hair cell loss (Gratton, M.A. (50) 211)

Inferior colliculus; Evoked response; Acoustic trauma (Salvi, R.J. (50) 245)

Hyaluronidase
Stereocilia; Chick; Tip link; Collagenase; Transduction (Pickles, J.O. (50) 139)

Immunoelectron microscopy
Cochlea; Aminoglycoside cochleotoxicity; Gentamicin (De Groot, J.C.M.J. (50) 34)

Inferior colliculus
Auditory growth and development; Gerbil; Cochlea; Otic capsule; Middle ear (Harris, D.M. (50) 1)

Guinea pig; Interaural time delays; Single unit recording (Palmer, A.R. (50) 61)

Single unit; Elevation; Free-field; Sound localization (Aitkin, L. (50) 97)

Evoked response; Acoustic trauma; Hearing loss (Salvi, R.J. (50) 245)

Inner ear
Equilibrium; Vertigo; Hair cell (Zenner, H.P. (50) 289)

Interaural time delays
Guinea pig; Inferior colliculus; Single unit recording (Palmer, A.R. (50) 61)

Level
Frequency discrimination; Amplitude modulation; Auditory prosthesis; Electrical stimulation; SAM noise; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Microcystic lesion
Cochlear nucleus; Gerbil; Aging (Statler, K.D. (50) 275)

Middle ear
Auditory growth and development; Gerbil; Cochlea; Otic capsule; Inferior colliculus (Harris, D.M. (50) 1)

Neurotransmitter
Excitatory amino acids; Hearing; Hair cells; Chromatography (Sewell, W.F. (50) 127)

Noise/drug interaction
Cisplatin; Ototoxicity; Evoked response; Hair cell loss; Hearing loss (Gratton, M.A. (50) 211)

Nonhuman primate
Frequency discrimination; Level; Amplitude modulation; Auditory prosthesis; Electrical stimulation; SAM noise; Psychophysics (Pfingst, B.E. (50) 43)

Auditory prosthesis; Electrical stimulation; Psychophysics; Threshold (Pfingst, B.E. (50) 225)

Nonlinearity
Cochlea; Hair cell; Two-tone suppression (Cheatham, M.A. (50) 193)

Ossiculectomy
Cochlea; Hair cell; Acoustic trauma; Acoustic deprivation (Fukushima, N. (50) 107)

Otic capsule
Auditory growth and development; Gerbil; Cochlea; Middle ear; Inferior colliculus (Harris, D.M. (50) 1)

Ototoxicity
Cisplatin; Noise/drug interaction; Evoked response; Hair cell loss; Hearing loss (Gratton, M.A. (50) 211)

Furosemide; Endocochlear potential; Bird (Schermuly, L. (50) 295)

Outer hair cells
Dynamic range; Rate-intensity function; Basilar membrane nonlinearity (Yates, G.K. (50) 145)

Presbyacusis
Compound action potential; Auditory nerve; Aging; Gerbil; Cochlear microphonic (Hellstrom, L.I. (50) 163)

Psychophysics
Frequency discrimination; Level; Amplitude modulation; Auditory prosthesis; Electrical stimulation; SAM noise; Nonhuman primate (Pfingst, B.E. (50) 43)

Auditory prosthesis; Electrical stimulation; Nonhuman primate; Threshold (Pfingst, B.E. (50) 225)

Rat
Androgens; Angiotensin II; Blood pressure; Cochlear blood flow (Flynn, A.J. (50) 119)

Rate-intensity function
Dynamic range; Outer hair cells; Basilar membrane nonlinearity (Yates, G.K. (50) 145)

Regeneration
Hair cells; Age (Ryals, B.M. (50) 87)

SAM noise
Frequency discrimination; Level; Amplitude modulation; Auditory prosthesis; Electrical stimulation; Psychophysics; Nonhuman primate (Pfingst, B.E. (50) 43)

Sensing membrane
Amphibian papilla; Tonotopic organization; Tectorial membrane; Frog (Yano, J. (50) 237)

Single unit
Inferior colliculus; Elevation; Free-field; Sound localization (Aitkin, L. (50) 97)

Single unit recording
Guinea pig; Inferior colliculus; Interaural time delays (Palmer, A.R. (50) 61)

Sound localization
Inferior colliculus; Single unit; Elevation; Free-field (Aitkin, L. (50) 97)

Spectral-temporal trade-off
Gap detection; Temporal acuity; Bird hearing (Okanoya, K. (50) 185)

Stereocilia
Chick; Tip link; Collagenase; Hyaluronidase; Transduction (Pickles, J.O. (50) 139)

Tectorial membrane
Amphibian papilla; Tonotopic organization; Sensing membrane; Frog (Yano, J. (50) 237)

Temporal acuity
Gap detection; Bird hearing; Spectral-temporal trade-off (Okanoya, K. (50) 185)

Threshold
Auditory prosthesis; Electrical stimulation; Nonhuman primate; Psychophysics (Pfingst, B.E. (50) 225)

Tip link
Stereocilia; Chick; Collagenase; Hyaluronidase; Transduction (Pickles, J.O. (50) 139)

Tonotopic organization
Amphibian papilla; Sensing membrane; Tectorial membrane; Frog (Yano, J. (50) 237)

Transduction
Stereocilia; Chick; Tip link; Collagenase; Hyaluronidase (Pickles, J.O. (50) 139)

Two-tone suppression
Cochlea; Hair cell; Nonlinearity (Cheatham, M.A. (50) 193)

Vertigo
Equilibrium; Hair cell; Inner ear (Zenner, H.P. (50) 289)